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Soon Jo Lee

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EXAMINER

GRAVINI, STEPHEN MICHAEL

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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3  
4 BEFORE THE BOARD OF PATENT APPEALS  
5 AND INTERFERENCES  
6

7  
8 *Ex parte* SOON JO LEE and JU HAN YOON  
9

10  
11 Appeal 2008-4323  
12 Application 10/663,995  
13 Technology Center 3700  
14

15  
16 Decided: November 24, 2008  
17

18  
19 *Before* WILLIAM F. PATE, III, JENNIFER D. BAHR and DANIEL S.  
20 SONG, *Administrative Patent Judges*.

21  
22 SONG, *Administrative Patent Judge*.

23  
24 DECISION ON APPEAL

25  
26 STATEMENT OF THE CASE

27 The Appellants appeal under 35 U.S.C. § 134 (2002) from a Final  
28 Rejection of claims 1-10. We have jurisdiction under 35 U.S.C. § 6(b)  
29 (2002).

30 The Appellants claim a structure for shielding an exposed core wire of  
31 a terminal block within a control panel of a clothes dryer.

Independent claims 1 and 4 read as follows:

1. A structure for shielding an exposed part of core wire of a terminal block in a clothes dryer comprising:
  - a base forming a floor;
  - a front cabinet forming a front portion of the clothes dryer;
  - a side cabinet forming a side portion of the clothes dryer;
  - a back cover forming a back side of the clothes dryer;
  - a top cover provided on a top surface of the front cabinet, the side cabinet and the back cover;
  - a control panel provided on a rear portion of the top cover; and
  - a terminal block provided on an inside of the control panel, wherein the terminal block comprises a back portion placed on the control panel and a front portion having a wall configured for shielding parts exposing a core of a wire extending above an uppermost portion of the front portion and below a bottom portion of the front portion.
4. A laundry dryer control panel comprising:
  - a terminal block disposed within the laundry dryer control panel, the terminal block including a back portion placed on the control panel and a front portion having a bottom part and an uppermost part;
  - a wall extending below the terminal block bottom part and above the terminal block uppermost part;
  - a first wire extending out of the terminal block bottom part; and
  - a second wire extending out of the terminal block uppermost part wherein the wall extends from the terminal block such that the wall shields portions of exposed cores of the first wire and the second wire.

1 The prior art relied upon by the Examiner in rejecting the claims is:

2	McCormick	2,742,708	Apr. 24, 1956
3	Lennon	4,030,802	Jun. 21, 1977
4	Sergeant	4,820,189	Apr. 11, 1989
5	Douty	EP 0 889 556 A2	Jan. 7, 1999

7           The Examiner rejected claims 4-6, 9 and 10 under 35 U.S.C. § 102(b)  
8   as anticipated by Douty.

9           The Examiner rejected claims 1, 3, 7 and 8 under 35 U.S.C. § 103(a)  
10   as unpatentable over McCormick and Lennon.

11 The Examiner rejected claim 2 under 35 U.S.C. § 103(a) as  
12 unpatentable over McCormick, Lennon and Sergeant.

14 The Examiner's decision is **AFFIRMED-IN-PART**.

## 16 ISSUES

17 The following issues have been raised in the present appeal.

18           1.       Whether the Appellants have shown that the Examiner erred in  
19 finding that Douty describes a terminal block disposed within a “control  
20 panel” as well as a “wall” that shields parts exposing a core of wire.

2. Whether the Appellants have shown that the Examiner erred in finding that Lennon describes a terminal block having a wall that shields parts exposing a core of wire and concluding that it would have been obvious to provide the terminal block inside of a control panel in the device of McCormick.

1  
2 FINDINGS OF FACT

3 The record supports the following findings of fact (FF) by a  
4 preponderance of the evidence.

5 1. McCormick describes a dryer having a raised back portion 217  
6 (i.e., a control panel) having an adjusting knob 561 and a timer 547 for  
7 controlling the operation of the dryer (col. 3, ll. 46-49; col. 5, ll. 16-23; fig.  
8 1). McCormick does not describe a terminal block.

9 2. Lennon describes a terminal block assembly 11 for appliances  
10 such as clothes dryers, the terminal block assembly including a sequence  
11 timer 13 (col. 4, ll. 42-49; col. 5, ll. 14-20; fig. 1 and 2). The described  
12 terminal block assembly 11 also includes a casing 23 and a releasable cover  
13 59 that define a closed wall (col. 5, ll. 43-53; figs. 2-4) which shields  
14 exposed cores (unnumbered; figs. 2-5) of electrical leads 35 (i.e., wires) on  
15 which terminals 25 (i.e., connectors; col. 4, ll. 53-62; fig. 2-5) are connected.  
16 The electrical leads 35 extend above and below the terminal block (figs. 1  
17 and 2). Lennon further teaches the desirability of allowing quick inspection  
18 of the various electrical connections within the casing 23 (col. 5, ll. 47-55).

19  
20 PRINCIPLES OF LAW

21 “A claim is anticipated only if each and every element as set forth in  
22 the claim is found, either expressly or inherently described, in a single prior  
23 art reference.” *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed.  
24 Cir. 1987). Analysis of whether a claim is patentable over the prior art

1 under 35 U.S.C. § 102 begins with a determination of the scope of the claim.  
2 We determine the scope of the claims in patent applications not solely on the  
3 basis of the claim language, but upon giving claims their broadest reasonable  
4 construction in light of the specification as it would be interpreted by one of  
5 ordinary skill in the art. *In re Prater*, 415 F.2d 1393, 1395-96 (CCPA  
6 1969). The properly interpreted claim must then be compared with the prior  
7 art.

8 “Section 103 forbids issuance of a patent when ‘the differences  
9 between the subject matter sought to be patented and the prior art are such  
10 that the subject matter as a whole would have been obvious at the time the  
11 invention was made to a person having ordinary skill in the art to which said  
12 subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727,  
13 1734 (2007). The question of obviousness is resolved on the basis of  
14 underlying factual determinations including (1) the scope and content of the  
15 prior art, (2) any differences between the claimed subject matter and the  
16 prior art, (3) the level of skill in the art, and (4) where in evidence, so-called  
17 secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18  
18 (1966).

19 In *KSR*, the Supreme Court emphasized “the need for caution in  
20 granting a patent based on the combination of elements found in the prior  
21 art,” and reaffirmed principles based on its precedent that “[t]he combination  
22 of familiar elements according to known methods is likely to be obvious  
23 when it does no more than yield predictable results.” *KSR*, 127 S.Ct. at  
24 1739. The Court also explained that “[i]f a person of ordinary skill can

1 implement a predictable variation, §103 likely bars its patentability.” *Id.* at  
2 1740. The Court noted that “[t]o facilitate review, this analysis should be  
3 made explicit,” but “the analysis need not seek out precise teachings directed  
4 to the specific subject matter of the challenged claim” *Id.* at 1741 (citing *In*  
5 *re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

6  
7 ANALYSIS

8 Claims 4-6, 9 and 10

9 The Examiner rejected these claims contending that Douty anticipates  
10 each and every limitation recited in these claims (Ans. 3). The Appellants  
11 contend that Douty fails to expressly or inherently describe a laundry dryer  
12 control panel including a terminal block disposed within the laundry dryer  
13 control panel (App. Br. 5; Reply Br. 6). The Appellants also contend that  
14 Douty does not describe a wall extending below and above the terminal  
15 block to shield portions of exposed cores of a first wire and a second wire  
16 (App. Br. 5, 6; Reply Br. 7, 8). We agree.

17 Independent claim 4 is directed to a laundry dryer control panel with a  
18 terminal block disposed therein. The Examiner argues that Douty describes  
19 a terminal block which is disposed in a panel, and states that the recited  
20 limitation “control” does not distinguish the invention from Douty because  
21 the panel of Douty also controls the electrical components of a clothes dryer  
22 (Ans. 6-7). However, the Examiner has not pointed to any disclosure in  
23 Douty that the panel 150 provides any type of control over any component  
24 of the clothes dryer as stated by the Examiner. In this regard, Douty merely

1 states that the panel 150 may be the housing of an appliance, the panel 150  
2 being conductive to allow grounding and having a cutout 152 with various  
3 edges for mounting the terminal block (col. 2, ll. 47-57; col. 3, ll. 10-17).  
4 While the described terminal block conveys the electricity required for  
5 operating the dryer, mere conveyance of electric power without more (e.g.,  
6 some switching function to selectively supply and cut off supply of current)  
7 does not constitute control. Thus, the Examiner's position that the limitation  
8 reciting a terminal block disposed within a "laundry dryer control panel" is  
9 satisfied by panel 150 of Douty is unreasonable.

10 In addition, we fail to see how any of the components of the terminal  
11 block 10 in Douty identified by the Examiner (end wall 26, skirt 22, terminal  
12 sites 20, mounting periphery 16; Ans. 3 and 7) satisfies the limitation of  
13 claim 4 requiring the wall to extend below and above the terminal block 10.  
14 With respect to the Examiner's alternative position that cover 168  
15 corresponds to the recited "wall," we note that the cover 168 also does not  
16 extend below and above the terminal block 10.

17 The Examiner's yet another alternative position is that panel 150  
18 corresponds to the recited "wall" of claim 4 (Ans. 7). However, this position  
19 is also not persuasive, because the panel 150 is purported to correspond to  
20 the control panel of claim 4 as discussed *supra*. In our view, the panel 150  
21 cannot reasonably be read to correspond to both the control panel and the  
22 wall. Moreover, even if the panel 150 is construed to correspond to the wall  
23 recited in claim 4, we fail to see how the panel 150 "shields portions of  
24 exposed cores of the first wire" as further recited in claim 4. In particular,

1 Figure 2 of Douty appears to show that any exposed core of wires 186 (i.e.,  
2 second wire extending out of the terminal block upper most part) that are  
3 connected to terminals 86 would be shielded by the panel 150 because the  
4 wires are behind the panel 150 as shown in Figure 6. However, Figure 6 of  
5 Douty also shows that the exposed cores of wires 190/192 (i.e., first wire  
6 extending out of the terminal block bottom part) that are connected to  
7 terminals 188 are entirely within the terminal block 10, and thus, not  
8 shielded by the panel 150 in any way.

9 In view of the above, we conclude that the Appellants have shown  
10 that the Examiner erred in rejecting independent claim 4 as anticipated by  
11 Douty. In addition, for the same reasons discussed, we also find that the  
12 Appellants have shown that the Examiner erred in rejecting claims 5, 6, 9  
13 and 10 (that ultimately depend from claim 4) as anticipated by Douty.  
14

15 Claims 1, 3, 7 and 8

16 The Examiner states that McCormick describes all of the limitations  
17 of independent claim 1 except for the limitation directed to the terminal  
18 block (Ans. 4). The Examiner relies on Lennon to cure this deficiency and  
19 rejects claim 1 as unpatentable over McCormick and Lennon (Ans. 4 and 5)  
20 stating that it would have been obvious for one of ordinary skill in the art to  
21 combine the teachings of McCormick and Lennon to improve mounting of a  
22 multiple connector assembly in order to allow quick connection and  
23 disconnection of the terminal block assembly (Ans. 5 and 9).

1           The Appellants contend that Lennon fails to describe the limitations of  
2 claim 1 and that the Examiner admits that the combination of McCormick  
3 and Lennon fails to describe the limitations of claim 1 (App. Br. 7 and 8;  
4 Reply Br. 9). More specifically, the Appellants contend that Lennon does  
5 not describe a terminal block inside of a control panel or a wall for shielding  
6 an exposed part of a core wire (App. Br. 7 and 8). The Appellants also  
7 contend that Lennon fails to describe shielding of exposed “core of a wire”  
8 extending above and below the front portion of the terminal block because  
9 the wires of Lennon are insulated (App. Br. 9). We disagree.

10           Firstly, with respect to the purported admission by the Examiner, we  
11 note that the Examiner’s statement “[i]t is recognized that McCormick and  
12 Lennon might not teach every element of the claimed invention” quoted by  
13 the Appellants is only a portion of the statement. The remaining portion of  
14 the same sentence continues: “but rather, that it would have been obvious to  
15 teach the claimed invention, as rejected above” (Ans. 9). Thus, although the  
16 Examiner’s statement is poorly worded and not entirely clear, we understand  
17 the statement to mean that while neither McCormick nor Lennon alone  
18 describes all of the limitations of claim 1, the subject matter of claim 1  
19 would have been obvious in view of the combination of McCormick and  
20 Lennon as set forth in the rejection of claim 1.

21           With regard to the positioning of the terminal block in a control panel  
22 of a dryer, the Appellants appear to be analyzing the prior art references  
23 separately. However, non-obviousness cannot be established by attacking

1 references individually. *See In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991);  
2 *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

3 In the present case, McCormick describes a dryer with a control panel  
4 (raised back panel 217) which includes an adjusting knob 561 and a timer  
5 547 (FF 1). Lennon describes a timer 13 for a dryer with a terminal block  
6 assembly 11 having a releasable cover 59, and teaches the desirability of  
7 allowing quick inspection of the various electrical connections within the  
8 casing 23 (FF 2). The Examiner articulated that it would have been obvious  
9 for one of ordinary skill in the art to combine the teachings of McCormick  
10 and Lennon to improve mounting of a multiple connector assembly in order  
11 to allow quick connection and disconnection of the terminal block assembly  
12 (Ans. 5 and 9). We find the articulated reason to be rational and conclude  
13 that it would have been obvious to combine McCormick and Lennon as  
14 proposed by the Examiner to result in a dryer with a control panel where the  
15 back portion of the terminal block is mounted within the control panel in  
16 order to provide access to, and facilitate inspection of, the connections  
17 within the terminal block.

18 In addition, in contrast to the Appellants' contention that Lennon does  
19 not describe a wall for shielding an exposed part of core wire of a terminal  
20 block, Lennon describes a casing 23 and a cover 59 (FF 2) that shields  
21 exposed cores of the wires of the terminal block, thereby satisfying the  
22 limitation reciting "a wall configured for shielding parts exposing a core of a  
23 wire extending above an uppermost portion of the front portion and below a  
24 bottom portion of the front portion" of claim 1.

1       The Appellants' contention that the leads 35 of Lennon are insulated  
2 and thus, a "core of a wire" is not exposed is not persuasive. As noted by  
3 the Examiner, the leads also include an exposed portion to which terminals  
4 25, 101 and 201 (i.e., connectors) are connected (FF 2; Ans. 10). These  
5 exposed portions of the various wires are shielded by the casing 23 and the  
6 cover 59. In this regard, we note that independent claim 1 does not recite  
7 that the exposed core extends above and below the front portion of the  
8 terminal block, but instead, recites that a wire extends above, and below, the  
9 front portion of the terminal block. With regard to this limitation, we  
10 observe that the Appellants' Specification and drawings do not describe a  
11 single wire which extends both above and below the front portion of the  
12 terminal block. Instead, Figure 3 shows two separate wires, wire 9b  
13 extending above the uppermost portion of the front portion, and wire 8a<sup>1</sup>  
14 extending below the bottom portion. For consistency with the Appellants'  
15 disclosure, we do not construe the claim language "a wire" as being limited  
16 to a single continuous wire. The wires 35 of Lennon clearly extend above  
17 and below the front portion of the terminal block thereby satisfying this  
18 limitation (FF 2).

19       Therefore, in view of the above, the Appellants have not shown that  
20 the Examiner erred in rejecting independent claim 1 as unpatentable over

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<sup>1</sup> The reference numeral for wire 8a in Figures 2 and 3 appears to be inconsistent with the Specification which identifies the wire with reference numeral 9a. Either the drawing or the Specification should be amended to be consistent with each other in any further prosecution.

1 McCormick and Lennon. Dependent claims 3, 7 and 8 were not argued  
2 separately, and thus, the Appellants have also failed to show that the  
3 Examiner erred in rejecting these claims. *See* 37 C.F.R. 41.37(c)(1)(vii)  
4 (2007).

5  
6 Claim 2

7 Claim 2, which depends from claim 1, recites that the wall covers first  
8 and second connectors that connect the terminal block with a power cord  
9 wire. The Appellants contend that Sergeant does not cure the deficiencies of  
10 McCormick and Lennon, and further contend that the Examiner is  
11 improperly relying on different embodiments of Sergeant (Reply Br. 11).

12 However, the Examiner is merely relying upon Sergeant for  
13 describing a power cord wire (col. 4, ll. 1-12) attached to a terminal block  
14 (Ans. 11). The Examiner also states that it would have been obvious to  
15 provide the power cord wire of Sergeant in the combination of McCormick  
16 and Lennon, and to shield the provided power cord wire (Ans. 5 and 6). We  
17 agree. The devices of McCormick and Lennon would require a “power cord  
18 wire” to supply the requisite electricity, and shielding the connection of such  
19 a power cord wire would have been obvious to one of ordinary skill in the  
20 art in view of Lennon, which shields the connectors that convey the supplied  
21 electricity. Therefore, the Appellants have not shown that the Examiner  
22 erred in rejecting dependent claim 2.

CONCLUSIONS

1. The Appellants have shown that the Examiner erred in rejecting claims 4-6, 9 and 10 as being anticipated by Douty.

2. The Appellants have not shown that the Examiner erred in rejecting claims 1, 3, 7 and 8 as unpatentable over McCormick and Lennon.

3. The Appellants have not shown that the Examiner erred in rejecting claim 2 as unpatentable over McCormick, Lennon and Sergeant.

ORDER

1. The Examiner's rejections of claims 1, 2, 3, 7 and 8 are AFFIRMED.

2. The Examiner's rejection of claim 4-6, 9 and 10 is REVERSED.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

ack

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